THE MURPHY CHEMICAL COMPANY LIMITED,
WHEATHAMPSTEAD,
HERTS.

ADVISORY BULLETIN No. 5

ON

The Plum Sawfly

(HOPLOCAMPA FLAVA, L.).

KEEP THESE BULLETINS IN THE GRATIS FILING
COVER WE SUPPLY.

The Plum Sawfly.

LIFE HISTORY.

The adults of this pest emerge from cocoons in the soil, generally in April, about a week before Czar plums are in full bloom. Eggs are laid within a few days of emergence, as a rule one only is deposited in each fully opened blossom, usually in the wall of the receptacle. As in the case of the Apple Sawfly, the presence of the egg can be detected from the outside by the rusty brown scar in the side of the calyx-cup, which marks the point where the ovipositor of the female was inserted to deposit the egg.

The period of incubation of the egg is about three weeks ; hatching generally commences when the " cots " are splitting, that is, when the young fruitlet has begun to grow so that the calyx-cup is splitting down the side. Soon after hatching the young larva, which is a dirty white colour and about one-sixteenth-of-an-inch in length, bores into a developing fruitlet. It grows rapidly and soon migrates into another plum ; here it burrows deeply, feeding on the stone and black frass generally exudes from a hole in the side of the fruit. It migrates again once or twice before becoming fully fed, so that each larva may feed on as many as four fruits. About five weeks after hatching the larva is fully fed, some half-inch in length and dirty cream white in colour. The mature larvæ drop to the ground and construct cocoons, generally in the top nine inches of soil, in the latter part of June.

Here they remain until the following spring, when some of them pupate and about three weeks later emerge as adults. Others, however, may remain in the larval state over another winter before pupating. It is well known that this pest is extremely variable in its appearance ; a severe infestation one year may be followed by a mild one next year and it is thought it is due to this habit of some of the larvæ persisting over a second winter before pupating and emerging as adults.

NATURE OF DAMAGE.

As stated above, a single larva may feed on as many as four fruits ; each of these, after being attacked, ceases to grow and soon drops to the ground. In the case of a severe infestation, as much as 90% of the fruit may thus be entirely lost.

Early flowering varieties such as Monarch, or late flowering varieties such as Pond's Seedling, do not seem to suffer as much as Czar, which flowers in mid-season.

CONTROL.

We advocate the use of a wash consisting of :—

Nicotine Sulphate (40%) 20 ozs.		Nicotine Sulphate 8 ozs.
Lead Arsenate 2 lbs. powder or 4 lbs. paste.	or	Lead Arsenate ¾ lb. powder or 1¾ lbs. paste.
Wetter and Penetrant.*		Wetter and Penetrant.*
Water make up to 100 gals.		Water make up to 40 gals.

**The amount of Wetter and Penetrant depends on the material used.*

The wash should be applied as a coarse drenching spray so as to thoroughly soak the young fruitlets. Whenever possible a warm still day should be chosen on which to apply the spray.

A first application should be made when the larvæ are beginning to hatch, which is when the "cots" are commencing to split; this is usually eight days after petal fall (petal fall is taken as the time when 80 to 90% of the petals have fallen or turned brown and shrivelled). A second application is advisable eight days after the first.

It is important to remember that soap cannot be used in the above formula and that nicotine sulphate should be used and not ordinary nicotine.

We supply :—

Nicotine Sulphate (40%).

Spreadite (Wetter and Penetrant).

Lead Arsenate (Powder and Paste).